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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,713	10/12/2001	Patrick M. Sewall	RIDG101	3294

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EXAMINER
COBY, FRANTZ

ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/977,713	SEWALL ET AL.
	Examiner	Art Unit	
	Frantz Coby	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 March 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-61* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

This is in response to Applicant's amendment filed on March 25, 2005 in which claims 1,

5, 6, 10, 11, 18, 20, 27, 41 were amended and claims 54-61 were added.

Status of Claims

Claims 1-61 are pending.

Applicant's arguments filed on the aforementioned date have been fully

considered but they are not persuasive. Therefore, the rejection of claims 1-53 remains

and rejection for claims 54-61 are added..

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Claims 1-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Middleton WO 00/70770 in view of Chambers IV U.S. Patent no. 5,426,779.

As per claim 1, Middleton discloses "a compressed data structure" by providing

a Compression/Decompression method (See Middleton Title). In particular, Middleton

discloses the claimed limitations of "a plurality of code strings" as control codes (See

Middleton Figure 1, component 12; top of page 11) and "a plurality of look-up strings"

as look-up table means (See Middleton Figure 1, component 10; bottom of page 10,

page 6).

It is noted, however, Middleton did not specifically disclose "an index identifying

a particular code string to be retrieved and an instruction identifying an operation to be

performed on the retrieved code string" as recited in the instant claim 1. On the other

hand, Chambers, IV discloses a data compression/decompression system including a

lookup table indexable by data pairs from the history buffer wherein an encoding

scheme may by employed (See Chambers IV Figures 7, 10 and corresponding text;

Col. 2, line 62-Col. 3, line 7).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modified the system of Middleton and Chambers IV because they are

both directed to method and apparatus for data compression/decompression and are

both from the same field of endeavor. One of ordinary skill in the art at the time of the

invention would have been motivated to do so because the indexing teachings of

Chambers IV will permit the lookup table of Middleton to search and retrieve code

strings more efficiently.

As per claim 2, most of the limitations of this claim have been noted in the

rejection of claim 1 above. In addition, Chambers IV discloses the claimed limitations

of "wherein at least some of the code strings are positioned in a library and the index

of at least one look-up string identified a position in the library form which a particular

code string is to be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line

49).

As per claim 3, most of the limitations of this claim have been noted in the

rejection of claim above. In addition, Chambers IV discloses the claimed limitations of

"a segmented library, each segment of the library containing at least one code string"

(See Chambers IV Figure 7) wherein at least some of the code strings are positioned

in a library and the index of at least one look-up string identified a position in the

library form which a particular code string is to be retrieved" (See Chambers IV Figure

7; Col. 5, line 15-Col. 6, line 49).

As per claims 4-6, most of the limitations of these claims have been noted in

the rejection of claim 1 above. In addition, Chambers discloses the claimed

limitations of code strings are positioned in a history cache as a history buffer (Figure 7), instruction to retrieve the code string (See Chambers IV' Col. 10, line 50-Col. Col. 12, line 51).

As per claim 7, most of the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Middleton discloses the claimed limitations of "a decompression engine operable, for at least one look-up string, to retrieve a code string identified by the index in the look-up string and to perform operation on or using the retrieved code string according to the instruction in the look-up string" through a decompression method using an expansion technique (See Middleton Title, page 7).

As per claims 8-13, most of the limitations of these claims have been noted in the rejection of claim 7 above. In addition, Chambers discloses "wherein at least some of the code strings are positioned in a library and the index of at least one look-up string identified a position in the library form which a particular code string is to be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49); "a segmented library, each segment of the library containing at least one code string" (See Chambers IV Figure 7); an output memory; writing code strings to the memory; altering code strings (See Chambers IV Figures 1-3, Col. 4, lines 26-41).

As per claims 14-15, most of the limitations of these claims have been noted in the rejection of claim 7 above. In addition, Chambers discloses code stings

comprise thirty-two bits and look-up string includes no more than eight bits (See

Chambers IV Figure 7).

As per claim 16, most of the limitations of this claim have been noted in the

rejection of claim 7 above. In addition, Middleton discloses the claimed features of

"a first memory location", "a second memory location", and "a processor" through

the computers connected in the Internet environment wherein the compression and

decompression method is being implemented (See Middleton Abstract).

As per claims 17-26, most of the limitations of these claims have been noted in

the rejection of claim 16 above. In addition, Chambers discloses "wherein at least

some of the code strings are positioned in a library and the index of at least one

look-up string identified a position in the library form which a particular code string is to

be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49); a processor

cache as a buffer (Figure 7); a segmented library (Figure 7); code strings are

positioned in a history cache as a history buffer (Figure 7); instruction to retrieve the

code string (See Chambers IV Col. 10, line 50-Col. Col. 12, line 51); retrieve a code

string identified by the index in the look-up string and to perform operation on or using

the retrieved code string according to the instruction in the look-up string through a

decompression method using an expansion technique (See Middleton Title, page 7);

writing code strings to the memory; altering code strings (See Chambers IV Figures

1-3, Col. 4, lines 26-41); first memory location; second memory location; output

memory location (See Chambers Figure 1).

As per claim 27, Middleton discloses the claimed limitations of "a method for

decompressing a data structure having a plurality of look-up strings and a plurality of

code strings" through a decompression method using an expansion technique (See

Middleton Title, page 7). In particular, Middleton discloses reading a look-up string;

retrieving a code string identified by the look-up string; and performing on the retrieved

code string an operation identified by the look-up string through a browser wherein as

control codes that are retrieved (See Middleton Figure 1, component 12; top of page

11) and a plurality of look-up strings are read (See Middleton Figure 1, component 10;

bottom of page 10; page 6).

As per claims 28-40, most of the limitations of these claims have been noted in

the rejection of claim 27 above. In addition, Chambers discloses "wherein at least

some of the code strings are positioned in a library and the index of at least one

look-up string identified a position in the library form which a particular code string is to

be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49); a processor

cache as a buffer (Figure 7); a segmented library (Figure 7); code strings are

positioned in a history cache as a history buffer (Figure 7); instruction to retrieve the

code string (See Chambers IV Col. 10, line 50-Col. Col. 12, line 51); retrieve a code

string identified by the index in the look-up string and to perform operation on or using

the retrieved code string according to the instruction in the look-up string through a

decompression method using an expansion technique (See Middleton Title, page 7);

writing code strings to the memory; altering code strings (See Chambers IV Figures

1-3, Col. 4, lines 26-41); first memory location; second memory location; output

memory location (See Chambers Figure 1).

As per claim 41, all the limitations of this claim have been noted in the

rejection of claim 27. It is therefore rejected asset forth above.

As per claims 42-53, most of the limitations of these claims have been noted in

the rejection of claim 41 above. In addition, Chambers discloses "wherein at least some

of the code strings are positioned in a library and the index of at least one look-up string

identified a position in the library form which a particular code string is to be retrieved"

(See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49); a processor cache as a

buffer (Figure 7); a segmented library (Figure 7); code strings are positioned in a history

cache as a history buffer (Figure 7); instruction to retrieve the code string (See

Chambers IV Col. 10, line 50-Col. Col. 12, line 51); retrieve a code string identified by

the index in the look-up string and to perform operation on or using the retrieved code

string according to the instruction in the look-up string through a decompression method

using an expansion technique (See Middleton Title, page 7); writing code strings to the

memory; altering code strings (See Chambers IV figures 1-3, Col. 4, lines 26-41);.first

memory location; second memory location; output memory location (See Chambers

Figure 1).

As per claims 54-61, these claims are at least rejected for their dependencies

directly or indirectly on the rejected claims 1-53. They are therefore rejected as set forth

above.

Remarks

The Applicant's argued, that "neither reference is seen to teach or suggest an

index-instruction pair, wherein the instruction identifies an operation to be performed

on a retrieved code string that is identified by the index". The Examiner respectfully

submits that only Chambers IV was use to the teachings of an index-instruction pair.

In particular, Chambers IV discloses an index identifying a particular code string to be

retrieved and an instruction identifying an operation to be performed on the retrieved

code string" by providing a data compression/decompression system including a

lookup table indexable by data pairs from the history buffer wherein an encoding

scheme may by employed (See Chambers IV Figures 7, 10 and corresponding text;

Col. 2, line 62-Col. 3, line 7).

The Applicant also argued, that "while Chambers IV is seen to teach at col. 4,

lines 47-60 that each sorted pair SP array entry includes a location of a specific data

pair in a history buffer HB, that same entry is not seen to carry an instruction of what to

do with the data pair or data string once it is located". The Examiner disagrees with the

preceding argument because Chambers IV does disclose an index pair as shown in

Figure 4 of Chambers IV as sorted pairs array including a methodology and a DTL

Direct Lookup Table as well as code string to be retrieved from memory. The

methodology disclosed by Chambers IV is able to find similar instance of data pairs by

comparing and retrieving similar pairs. This is a clear indication of a teaching of an

index identifying code string to be retrieves from memory.

As to "instruction identifies an operation to be performed by a processor on the

retrieved code string" Chambers disclose sorted pairs stored in a history buffer. The

sorted pairs represent instructions to be performed by the Direct Lookup Table. In this

case, the operation to be performed is a sort operation indicated by the index pairs.

Therefore, the claimed feature of "instruction identifies an operation to be performed by

a processor on the retrieved code string" is clearly met by Chambers IV.

Further, the Applicant argued, "as neither Middleton nor Chambers IV teach or

suggest the instruction feature of the claimed invention, their combination also fails to

so teach and each pending claim is seen to patentably distinguish over the asserted

combination of art". The Examiner respectfully submits that, as detailed above,

Chambers IV discloses the instruction feature as claimed. With respect to the line of

argument that "their combination also fails to so teach each pending claim", the

Examiner disagrees with the preceding argument because the combination of the

prior art achieved the claimed limitations because It would have been obvious to one

of ordinary skill in the art at the time of the invention to modified the system of

Middleton and Chambers IV because they are both directed to method and

apparatus for data compression/decompression and are both from the same field of

endeavor. One of ordinary skill in the art at the time of the invention would have been

motivated to do so because the indexing teachings of Chambers IV will permit the

lookup table of Middleton to search and retrieve code strings more efficiently.

Also, In response to applicant's argument that "their combination also fails to

so teach each pending claim", the examiner recognizes that obviousness can only be

established by combining or modifying the teachings of the prior art to produce the

claimed invention where there is some teaching, suggestion, or motivation to do so

found either in the references themselves or in the knowledge generally available to

one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.

Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this

case, It would have been obvious to one of ordinary skill in the art at the time of the

invention to modified the system of Middleton and Chambers IV because they are

both directed to method and apparatus for data compression/decompression and are

both from the same field of endeavor. One of ordinary skill in the art at the time of the

invention would have been motivated to do so because the indexing teachings of

Chambers IV will permit the lookup table of Middleton to search and retrieve code

strings more efficiently.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz Coby whose telephone number is 571 272 4017. The examiner can normally be reached on Monday-Saturday 3:00PM-10: 30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571 272 4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free).

Frantz Coby
Primary Examiner
Art Unit 2161

June 12, 2005